

Excerpts from my field diary (July 2009 onwards)

Pankaj Oudhia

Possible utilization of obnoxious weed *Parthenium hysterophorus* as medicine through Traditional Healing methods.

Pankaj Oudhia

Convener, International Parthenium Research News Group [IPRNG]

Raipur, India

pankajoudhia@usa.net

Abstract

Parthenium hysterophorus is one of the ten worst weeds of the world. It is present in almost all parts of India. Living with this problematic weed since decades the Traditional Healers practicing Traditional medicinal knowledge have started experimentation with this weed. They are adding its different parts as primary, secondary and tertiary ingredients in Traditional Formulations. Its use as single herb in treatment of Type II Diabetes has been reported by modern researchers. In Traditional Healing of Indian state Chhattisgarh, the Healers are adding it in complex herbal formulations having plus 100 herbs. These complex herbal formulations are used in treatment of different types of cancer to Type II Diabetes. They are practicing Traditional Allelopathic knowledge to enrich *Parthenium* with medicinal properties. This research paper is an effort to discuss this new aspect of *Parthenium* utilization.

Introduction

In ancient Indian literatures related to different systems of medicine it is clearly mentioned that every plant on this Earth is useful and it is ignorance of human beings that have kept some plants as useful and others a waste (Oudhia, 2001). The Indian farmers are aware of this fact and they have been utilizing every plant growing in their crop fields and wastelands in the form of medicine, food and cattle feed (Oudhia, 1999a, b and c). Among these plants there are many plant being called weeds should not be considered as enemy. We have the example of farmers of Indian state Chhattisgarh using so-called weeds as potherbs in order to remain free from diseases round the year.

Indian state Chhattisgarh is known in the world for “Traditional Healing” system. Thousands of Traditional Healers are practicing Traditional Medicinal Knowledge in its original form. The Healers practice Traditional knowledge and enrich it with their experiments. In Traditional Healing they use both indigenous and exotic plants. *Parthenium hysterophorus*, *Lantana camara* and Eupatorium, considered as curse for biodiversity (Mahadevappa et al, 2001), are promising examples. These plants were not the part of Traditional Healing. It introduced as weed and established in surroundings. Living with these plants since decades, the innovative Healers started using it as medicine. They conducted experiments and after initial success added it in Traditional Formulations as secondary and tertiary ingredients. After using these formulations successfully they started adding it as primary ingredients.

Primary, Secondary and Tertiary Ingredients in Herbal Formulations

In Traditional Healing especially in Chhattisgarh in herbal formulations in general three types of ingredients are added. Primary, secondary and tertiary ingredients. Primary ingredients play main role in treatment of diseases where as secondary ingredients are added to enhance the performance of primary ingredients. Similarly, tertiary ingredients are added to enhance the performances of primary and secondary ingredients. Although it looks that secondary and tertiary ingredients are not much important, it is a fact that, without these ingredients, formulations are not considered complete.

Use of Parthenium in Traditional Healing through Complex Herbal Formulations

In treatment of Type II Diabetes the Healers use complex herbal formulations (CHF). In these formulations more than ingredients are added. Many formulations have over 500 herbs. The author has documented the Traditional medicinal knowledge about these formulations. In his report on Type II Diabetes and Traditional Healing (Present size plus 1000 GB) he has mentioned the CHFs in detail. *Parthenium hysterophorus* locally known as Gajar Ghas is added as secondary and tertiary ingredients at least in 30 formulations. Most of the Healers use its roots where as its leaves are also used here and there. They have specific criteria for the selection of potential plant. Roots are collected before and after flowering as per need. Recent Ethnobotanical surveys revealed that Parthenium is also added in CHFs used for other diseases including different types of cancer. In treatment of blood related troubles the Healers suggest the patients to crush specific herbal mixtures bare foot. Parthenium is added in these herbal mixtures as important ingredient. The use of Parthenium in this way has yet not been reported in reference literatures (Oudhia, 1994-2012).

Parthenium and Traditional Allelopathic Knowledge

The Traditional Healers of Chhattisgarh use different herbal extracts and leachates to treat the plants before collection (Oudhia, 2005). The purpose is to enrich the plants with desired medicinal properties (Oudhia, 2010a). This knowledge is named as Traditional Allelopathic Knowledge (Oudhia, 2006). The author has compiled and written many articles on different

aspects of this knowledge. His over 10,000 research documents on this unique aspect of Traditional Healing are online (Oudhia, 2009). The Healers are practicing this knowledge for Parthenium also. They use over 50 types of extracts and leachate for this purpose. They use different types of Haldi (*Curcuma sp.*) for this purpose. From forest they collect Jangli Haldi and Dokri Haldi and with the help of these wild Haldi treat the Parthenium population. In many parts freshly extracted juice of Medicinal Rice Bhejri is also applied in root zone of Parthenium. The Healers claim about increased medicinal properties but it has yet not been proven scientifically.

List of selected herbs added in herbal solutions used to enrich Parthenium with medicinal properties.

Scientific Name	Local Name	Specific parts used for treatment	Time of treatment	No. of ingredients in herbal solution	Remarks
<i>Tephrosia purpurea</i>	Sarphonk	Root	One week before collection	10	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Cleistanthus collinus</i>	Karra	Bark	One week before collection	10	
<i>Chloroxylon swietenia</i>	Bhirha	Leaves	Ten days before collection	21	
<i>Cynodon dactylon</i>	Doobi	Leaves	Fifteen days before collection	15	
<i>Lannea coromandelica</i>	Modgar	Bark	Fifteen days before collection	18	Practiced by the Traditional Healers using Parthenium

					for Type II Diabetes.
<i>Curcuma longa</i>	Haldi	Underground parts	Fifteen days before collection	5	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Curcuma aromatica</i>	Jangli Haldi	Underground parts	Fifteen days before collection	20	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Curcuma sp.</i>	Dokri Haldi	Underground parts	Fifteen days before collection	35	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Boswellia serrata</i>	Saliha	Bark and root	Fifteen days before collection	18	
<i>Sterculia urens</i>	Gindhol	Bark	Fifteen days before collection	21	Practiced by the Traditional Healers using Parthenium for Type II

					Diabetes.
<i>Andrographis paniculata</i>	Bhuineem	Leaves	Fifteen days before collection	35	
<i>Tinospora cordifolia</i>	Giloi	Bark	Fifteen days before collection	10	
<i>Mitragyna parvifolia</i>	Mundi	Bark and fruit	Fifteen days before collection	33	
<i>Diospyros melanoxylon</i>	Tendu	Bark and Root	Fifteen days before collection	15	
<i>Diospyros montana</i>	Bistendu	Bark and Fruit	Fifteen days before collection	25	
<i>Diospyros embryopteris</i>	Makhad Tendu	Bark and Fruit	Fifteen days before collection	12	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Saccharum spontaneum</i>	Kansi	Root	One week before collection	8	
<i>Terminalia chebula</i>	Harra	Bark	Fifteen days before collection	8	
<i>Madhuca indica</i>	Mahua	Bark and leaves	Fifteen days before collection	18	Practiced by the Traditional Healers

					using Parthenium for Type II Diabetes.
<i>Helicteres isora</i>	Aithi	Leaves and flowers	Fifteen days before collection	22	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Randia dumetorum</i>	Mainphal	Fruit and root	Fifteen days before collection	20	
<i>Careya arborea</i>	Kumhi	Root	Fifteen days before collection	20	
<i>Buchanania lanzan</i>	Char	Bark and root	Fifteen days before collection	23	
<i>Ficus mollis</i>	Kathpipal	Bark and fruit	Fifteen days before collection	20	
<i>Curculigo orchoides</i>	Kali Musli	Flower and root	Fifteen days before collection	25	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Soymida febrifuga</i>	Rohina	Bark and root	Fifteen days before collection	25	

<i>Ventilago denticulata</i>	Keonti	Stem	Fifteen days before collection	27	
<i>Martynia annua</i>	Baghnakha	Leaves and root	Fifteen days before collection	20	
<i>Ficus religiosa</i>	Pipal	All parts	Fifteen days before collection	5	
<i>Ficus racemosa</i>	Doomar	All parts	Fifteen days before collection	5	
<i>Ficus benghalensis</i>	Bar	All parts	Fifteen days before collection	8	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Ficus virens</i>	Gasti	All parts	Fifteen days before collection	25	
<i>Anisochilus carnosus</i>	Gandhila	Root	Fifteen days before collection	36	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Orthosiphon rubicundus</i>	Dasmoool	Root	Fifteen days before collection	10	Practiced by the Traditional Healers using

					Parthenium for Type II Diabetes.
<i>Selaginella bryopteris</i>	Bhataila Chara	Leaves	Fifteen days before collection	2	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Phyllodium pulchellum</i>	Dekhna Jadi	All parts	Fifteen days before collection	18	Practiced by the Traditional Healers using Parthenium for Type II Diabetes.
<i>Rivea hypocrateriformis</i>	Pate Koria	All parts	Fifteen days before collection	9	
<i>Indoneesiella longipedunculata</i>	Kadu Jadi	All parts	Fifteen days before collection	15	
<i>Trichuriella monsoniae</i>	Van Siliyari	All parts	Fifteen days before collection	31	

The recent experimentation on use of Parthenium for Type II Diabetes in rats (Patel et al 2008) claims that, as single remedy, Parthenium is useful in managing this trouble but the Healers never use it as single remedy. In CHF's Parthenium is added with other herbs as primary ingredients. The Healers claim that the use of Parthenium as single remedy is having many drawbacks. Hence, it must be used with compatible herbs. They have identified number of compatible herbs. Their search and experimentation are in progress.

Healer's way of protection from Parthenium allergy

The Healers are aware that Parthenium is allergy causing herb. They take special precaution during its collection. They apply Kadu Tel i.e. Mustard oil on body before reaching to the spot. They also use herbal combinations internally in order to remain free from harmful effects of Parthenium. Similar formulations are used when they collect Mucuna seeds in forest. (Oudhia, 2010b)

Surprising demand for Parthenium roots for Pharmaceutical research

Although Parthenium is present as weed in forest regions but it is not in the list of herbs collected by the herb collectors for traders. Few years back the author was informed about the demand of few quintals of dry roots of Parthenium from Kolkata. The purpose of collection was not disclosed. The firm engaged in pharmaceutical research ordered the roots and collectors collected it for the traders. It was new experience for them. The collectors unaware of toxic effects of Parthenium faced much problem during first time harvest. One year later same firm demanded for more roots. As Parthenium is present everywhere in India including in Kolkata it was matter of surprise that why the firm collected it from Chhattisgarh. Later the personal communication of author to the firm revealed that experiments are on to evaluate the medicinal properties of Parthenium. The firm is collecting Parthenium from different locations.

There have been many medicinal uses of Parthenium (Oudhia, 2001). *Parthenium hysterophorus* is a Homoeopathic Drug but it is not used frequently. The information collected through Ethnobotanical surveys is encouraging. It generates much hope that in future these uses may help in reducing Parthenium menace but it is too early to draw any conclusion. One of the purposes of this presentation is to motivate the young researchers to come forward to evaluate the medicinal potential of Parthenium under frame of scientific clinical trials. The author has documented the use of Parthenium in Chhattisgarh and neighboring states. There is need to document the new uses developed by the Healers as well as farmers and natives of other parts of India. Increasing flow of information on uses of Parthenium suggest that there is a need to establish online database on "Parthenium utilization." In areas where the Healers are using Parthenium in Traditional Healing, Parthenium is still a problem for common people. The Healers are using it in small quantity. Also CHF's are not very popular among them as many efforts are required to prepare such formulations. At this point joint effort of modern medical researchers and Traditional Healers can play vital role towards establishing Parthenium as useful plant.

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